



Sonoma County Water Agency Request for Proposals

ADDENDUM 2

Issued May 9, 2014

Deadline for Submission
June 10, 2014

CONTACT:

Rebecca Simonson

Rebecca.simonson@scwa.ca.gov

REQUEST FOR PROPOSALS FOR POWER PURCHASE AGREEMENT FOR FLOATING SOLAR PHOTOVOLTAIC (PV) AT SONOMA COUNTY WATER AGENCY PONDS

The Sonoma County Water Agency (Water Agency) invites proposals from firms interested in financing, designing, constructing, owning, operating, monitoring, and maintaining floating photovoltaic power system(s) (PV Systems) at various designated Water Agency ponds, and entering into a Power Purchase Agreement (PPA) for sale of power from each of the PV Systems to the Water Agency. A sample PPA is attached as Exhibit A. In addition to the purchase and sale of power, the PPA shall provide the Water Agency with a right to acquire one or more of the PV Systems after certain periods of time.

The proposed PV Systems would be built on ponds leased from the Water Agency or one of the Sanitation Zones or Districts managed by the Water Agency. A draft lease agreement is included in Exhibit B.

Background

The Water Agency owns or manages ponds at seven sites (see maps and drawings included as Exhibit C and a link to CAD drawings in AutoCAD format included as Exhibit G, if the original drawings for pond construction were prepared in AutoCAD for the respective pond), upon which we propose to place up to 21 MW (~~ACDC~~) of PV systems. See table below:

Zone/ District	Water Storage Facility	Usable pond surface area acres	Estimated Annual PV Production	
			MW DC	MWh/yr
Airport Larkfield Wikiup Sanitation Zone (ALWSZ)	South Pond	5.8	1.9	2,862
	North Pond	14.8	4.9	7,326
	Oceanview Reservoir (Site D)	5.0	1.7	2,491
	ALWSZ subtotal	25.6	8.6	12,680
Sonoma Valley County Sanitation District (SVCSD)	R-1	7.9	2.6	3,900
	R-2	9.0	3.0	4,449
	R-4	13.9	4.6	6,881
	R-5	5.8	1.9	2,877
	SVCSD subtotal	36.5	12.2	18,122
Total		62.1	20.8	30,802

The usable pond surface area is measured to be the available surface area of the bottom of each pond. The estimated annual PV production is only an indication and should not be used as the guaranteed size of the system(s).

The size of the project at each site shall be determined by the cost effectiveness of the PPA purchase price. Proposers may submit a proposal for less than 1 MW at any given site to avoid California Independent System Operator (CAISO) scheduling fees and/or they may utilize the maximum area possible for cost effectiveness with CAISO scheduling fees built into the PPA purchase price. Proposers may elect to submit a proposal including any single pond, or any combination of these ponds, and need not provide proposals for all ponds. Proposers shall submit proposals for each site in sufficient detail to allow the Water Agency to compare proposals on a site-by-site basis. It is not necessary that a proposer submit a proposal for all seven sites. The Water Agency may move forward with all sites, selected sites, or no sites.

Proposers would finance, design, construct, own, operate, monitor, and maintain the PV Systems, and sell all power from the panels to the Water Agency. The PV Systems would consist of installing floating photovoltaic panels atop ponds. The number and type of photovoltaic panels, supporting structures, configuration, and orientation of panels and rows of panels shall be dependent upon the optimum scheme to cost effectively maximize energy generation at the sites. Proposers should evaluate the seven sites based on power production potential, project cost, proximity to power transmission and distribution lines, significance of environmental impacts, and any other parameters deemed reasonable by the proposer.

The purpose of the PV Systems is to generate renewable electric power and related environmental attributes to be sold to the Water Agency. The Water Agency will not be using this power for itself and the PV System(s) will not be connected to the Water Agency facilities. The Water Agency intends to resell the power to electric power utilities, private brokers, joint power authorities, municipalities, community choice aggregators, or similar entities. In addition, the PPA must allow the Water Agency to assign the PPA to such entities, subject to Proposer's evaluation of the creditworthiness of the assignee. Proposers should note that the

Water Agency has a credit rating of AA as designated by Standard & Poor's and credit rating of AA+ as designated by Fitch Ratings.

The awarded Proposer ~~will~~shall determine and secure from all applicable governing agencies and the utility company all required rights, permits, tax credits and/or exemptions (if any), approvals, and interconnection agreements at no additional cost to the Water Agency.

Minimum Qualifications

Proposer shall have a valid license to construct PV systems in the state of California and shall have experience in providing the services associated with installing and operating PV systems of this size and complexity (at least three PV system projects of at least 500 kW DC each within the past three years, which need not have included any floating solar elements). Proposer's firm shall be well established with a full-time qualified staff able to provide the required PV system design and construction services. The Water Agency has determined that all Proposers must possess or provide subcontractor(s) possessing current California Contractor's License in at least one of the following classes throughout the duration of the Project:

- A - General Engineering Contractor
- C10 - Electrical Contractor
- C46 - Solar Contractor

If Proposer is a specialty contractor, the majority of the work must fall within the specialty classification, and all work to be performed outside of the licensed specialty must be performed by appropriately licensed subcontractors.

All subcontractors employed by Proposer must have a current license in the specialty for the work being done, and are limited to performing only work for which licensed.

Proposer shall have insurance as detailed in the sample Lease Agreement in Exhibit B.

Site Visits

Two site visits that will each cover all sites are scheduled for 9:00 am, Wednesday, April 23, 2014, and 9:00 am, Thursday, April 24, 2014. Each site visit will begin at the Sonoma County Water Agency Administration Building (404 Aviation Blvd, Santa Rosa CA) and will conclude at the SVCSD Wastewater Treatment Facility (22675 8th Street East, Sonoma CA) at approximately 12:30 pm. Proposers will be escorted by Water Agency staff, however proposers need to bring their own vehicles to follow Water Agency vehicles. Site visits are not mandatory, but are recommended.

Technical Requirements

Codes and Standards

This Project falls under the expanded definition of "public works" project established under California Labor Code section 1720.6 and prevailing wages apply. It is the responsibility of the Proposer to consult prevailing wages and determine appropriate classifications.

All work and materials shall be in full accordance with the latest rules and regulations of the State Fire Marshall, Safety Orders of the Division of Industrial Safety, International Standards for Organization (ISO) codes, California Building Code, California Mechanical Code, Title 24, National Electrical Code, and other applicable laws or regulations.

Burying conduits or trenching in the pond embankments must meet requirements of California Department of Water Resources, Division of Safety of Dams and may be subject to their review and written approval. Conduit on land shall be below grade where practicable.

Proposer shall design and construct the PV Systems to codes and in such manner as to ensure complete electrical safety for persons, equipment, and property during installation and under both normal and abnormal operating conditions.

The quality of the equipment and services supplied by Proposer shall be consistent with the applicable codes and standards including but not limited to those listed below. The most recent approved revision shall apply.

- National Electrical Code - NFPA 70
- UBC - Uniform Building Code
- All outdoor enclosures shall be minimum NEMA 3R, or equivalent rating
- Inverters shall be certified to UL 1741 or equivalent
- ANSI/IEEE 928 Recommended Criteria for Terrestrial PV Power Systems (PV System Performance criteria)
- ANSI/ASCE 7- Building code Requirements for Minimum Design Loads in Buildings and Other Structures
- ACI 318 with Commentary (ACI 318R) - Building Code Requirements for Reinforced Concrete
- IEEE 927 Recommended Practice for Utility Interface of PV Systems
- ANSI/IEEE Std 100
- ANSI/IEEE Std 1262, IEEE Recommended Practice for Qualification of Photovoltaic (PV) Modules
- ASTM Std E 892, Standard Tables for Terrestrial Solar Spectral Irradiance at Air Mass 1.5 for 37° Tilted Surface
- ASTM Std E 1328, Standard Terminology Relating to Photovoltaic Solar Energy Conversion
- IEEE Std C37.13, IEEE Standard for Low-Voltage AC Power Circuit Breakers Used in Enclosures
- IEEE Std C37.14, IEEE Standard for Low-Voltage DC Power Circuit Breakers Used in Enclosures (ANSI)
- IEEE Std C37.20.1, IEEE Standard for Metal-Enclosed Low-Voltage Power Circuit-Breaker Switchgear
- IEEE Std C37.20.2, IEEE Standard for Metal-Clad and Station-Type Cubicle Switchgear

- IEEE Std C37.20.2b, Supplement to IEEE Standard for Metal-Clad and Station-Type Cubicle Switchgear: Current Transformers Accuracies
- IEEE Std C37.20.3, IEEE Standard for Metal-Enclosed Interrupter Switchgear
- IEEE Std C57.12.01, IEEE Standard General Requirements for Dry-Type Distribution and Power Transformers Including Those with Solid Cast and/or Resin Encapsulated Windings
- IEEE Std C57.12.51, IEEE Standard for Ventilated Dry-Type Power Transformers, 501 kVA and Larger, Three-Phase, with High-Voltage 601 V to 34 500 V; Low-Voltage 208Y/120 V to 4160 V- General Requirements
- IEEE Std C57.13, IEEE Standard Requirements for Instrument Transformers
- IEEE Std C57.13.1, IEEE Guide for Field Testing of Relaying Current Transformers (ANSI)
- IEEE Std C57.13.2, IEEE Standard Conformance Test Procedures for Instrument Transformers (ANSI)
- Certification of Proposer Supplied Equipment: All PV modules, inverters and electrical components shall be required to be listed or recognized by an appropriate and recognized United States Safety Laboratory (for example: UL, ETL, etc.).

Pond Water and liners

Water levels vary at all ponds. There is no historical trend that has been monitored nor can a historical trend be used to assess how the ponds will be operated in the future. Proposers must design for the lowest water level to be the bottom of the ponds.

The water in the ponds is treated water from wastewater treatment plants used primarily for irrigation and in the case of Sonoma Valley in winter discharged into Shell Slough which leads to San Pablo Bay. The total dissolved solids and pH level are not controlled once the water reaches the ponds. Effluent sampling readings for SVCSD and ALWSZ wastewater treatment plants are provided in Exhibit F. Proposers shall determine what corrosion concerns may be present and list these in their proposal. Chemicals that could violate Water Agency discharge permits are not allowed in or near the water, therefore proposers must identify what possible chemicals they will be using for the project.

R-4 liner is 80mm EPDM, R-5 liner is 60mm EPDM, and the remaining ponds are unlined. See Exhibit C for materials of unlined ponds. Proposers shall determine if their proposed design will degrade the quality of the liner and pond structure and provide this information in their proposal. Proposers must provide a detailed plan of how any penetration and sealing of pond liners will occur if penetration is necessary and the Water Agency must approve this plan.

The Water Agency conducts vegetation removal, rip rap repair and lining repair as needed around and within the ponds. The maintenance schedule is flexible and should not affect Proposer's cost.

Construction

The Water Agency and Sanitation District and Sanitation Zone own the ponds and control right of entry.

The Water Agency will provide staging areas within parcel boundaries of facilities wherever possible and the size and location of staging areas will be negotiated with selected proposer(s). Parcel boundaries and potential suggested staging areas are included in the revised Exhibit C.

Proposers should be aware that there are security issues at sites and equipment may need to be locked and secured over night and on weekends.

The maximum weight allowed on the berms of the ponds is 50,000 lbs. The top of the berm may be blocked during construction to prevent circumnavigation.

Motorboats for construction are only allowed on unlined ponds and they may not exceed sixteen feet.

For reservoirs within the jurisdiction of the Division of Safety of Dams (DSOD), <http://www.water.ca.gov/damsafety/index.cfm>, all embankment penetrations must be approved by DSOD. Penetrations have been allowed by DSOD in the past.

Interconnection

Proposer shall provide all materials and equipment necessary to interconnect the PV System(s) with the public power utility's (PG&E) local transmission and/or distribution system in accordance with CAISO standards and PG&E's standards. Proposers are required to identify delivery point in accordance with these standards. Proposer shall fulfill all application, study, and testing procedures necessary to complete the interconnection process. Interconnection requirements to PG&E's transmission and distribution system can be found at <http://www.pge.com/b2b/newgenerator/wholesalegeneratorinterconnection/index.shtml>. PG&E has developed an interactive, Google-based map of its service territory at <http://www.pge.com/b2b/energysupply/wholesaleelectricissolicitation/PVRFO/pvm.ap/>. The map provides the location of selected electric transmission lines, distribution lines and associated substations within the PG&E service areas. In addition, the map also provides specific information, such as operating voltages, line capacity and substation names. Please note that the map is a tool to help Proposer, contractors, and developers identify potential project sites. The map is not a guarantee that generators can interconnect at any particular time and place. Several factors influence the ability and cost of interconnecting distributed generation systems to the electric system.

The PV System(s) shall be connected to the grid and shall not be connected to the Water Agency's power system(s). The PV System(s) shall be completely isolated from PG&E during maintenance and repair.

CEQA

The awarded Proposer ~~will~~ shall be responsible for preparing all necessary California Environmental Quality Act (CEQA) documentation. The Water Agency will assist the awarded Proposer in the preparation of the Initial Study/Environmental Checklist.

Energy Production

Based on the available surface area for mounting PV panels, propose an optimal PV system. Use the National Renewable Energy Laboratory (NREL) PVWatts™ calculator or PV Syst software for comparison of energy production. Proposer may also present its own algorithm in addition to the se NREL calculators. Note that it is Proposer's responsibility to confirm the available surface area by physical inspection, and using the facility plans and any other supporting material provided with this RFP.

Proposers are responsible to obtain weather data from nearby credible sources such as the National Weather Service or National Oceanic Atmospheric Administration. Weather data from Water Agency owned ground mount solar systems may not be effectively calibrated.

Proposers shall determine Available Capacity energy that is expected to be delivered to the Water Agency, by hour. Guaranteed Capacity AC is the real world measured capacity guaranteed by proposer calculated in the manner they choose to guarantee.

Monitoring System

Proposer shall develop and provide a monitoring program that will allow Water Agency staff to monitor the performance of the PV system(s) in historical and real-time, for the life of the equipment.

Commissioning and Start-up Testing

During the start-up, the Water Agency, and/or its independent engineer/consultant, shall observe and verify each system performance. Required commissioning and acceptance test services include:

- Starting up the solar PV system(s) until it achieves the performance requirements
- Conducting the performance testing over a consecutive 24 hour period
- Conducting the successful delivery of power within 30 days following completion of the system

Warranties

Warranties against defective design, materials, workings, and latent defects for the time period specified for each warranty shall be provided, as well as all other warranties required or implied by law. Proposer shall fully define in its proposal the offered warranty which shall meet, at a minimum, the following requirements:

- Five year complete system warranty
- Ten year inverter and power transformers warranty
- 25 year PV panel operation and degradation warranty

Operation and Maintenance

Perform all required maintenance activities, including warranty repair work and equipment replacement including, but not limited to, inverter replacement in order to

keep the system(s) operational.

PV System(s) Removal

The awarded Proposer shall bear the sole responsibility of removing the PV system(s) at the end of the 20 year service term should the Water Agency, in its sole discretion, opt not to acquire the PV system(s).

Submittal of Proposals

Please review the RFP and attachments before submitting a proposal. If any significant omissions or ambiguities come to the Water Agency's attention while the RFP is under review by interested firms, the Water Agency will make a uniform written response to all parties.

Proposals shall include the following:

1. A Table of Contents and page numbers.
2. A work program and timetable.
3. A statement of similar work previously performed, including at least three references with name of organization, contact person, and telephone number.
4. A statement of qualifications and a list of personnel to be assigned to the work, including a resume for each, listing education, experience, and expertise in this type of work.
5. A list of persons or firms to whom any phase of the work may be subcontracted, including a statement of their qualifications and experience.
6. Any proposed exceptions to the indemnification, insurance, or other terms of the PPA or Lease. Please make comments as specific as possible. If no exceptions are included in the proposal the standard terms will be considered acceptable and will not be renegotiated prior to execution.
7. Pricing sheets (included as Exhibit D)
8. PV Systems description
9. Description of mounting system
10. Equipment details and description layout of installation site(s)
11. Selection of key equipment
12. Specifications for equipment procurement and facility installation
13. Performance data sheets of equipment components, subsystem, and project, including PV and inverter manufacturer, model, and quantities
14. Electrical system interconnection requirement with the public power utility's (PG&E) transmission and/or distribution system
15. Controls, monitoring equipment, and instrumentation
16. Performance monitoring

Interested firms should submit one electronic copy of their proposal by 5:00 pm, Tuesday, June 10, 2014. Mail to the attention of Rebecca Simonson, Sonoma County Water Agency, hand

deliver to 404 Aviation Boulevard, Santa Rosa, California 95403-9019, or email to rebecca.simonson@scwa.ca.gov.

Selection Procedure

Proposals that do not include all of the information requested cannot be adequately evaluated. Selection will be based on responsiveness to the work requirements, professional qualifications and overall performance commitment, demonstrated ability to perform the work in accordance with good practices common to the industry, time required, acceptance of standard contract terms, PV System and monitoring system description including typical useful life, total estimated power production, total cost per MWh and spatial requirements.

A 5% weighting will be provided in the total rating score for local firms. A Local Service Provider (local firm) is defined as a business or consultant who has a valid physical address located within Sonoma County from which the vendor or consultant operates or performs business on a day-to-day-basis, and holds a valid business license if required by a city within the jurisdiction of Sonoma County. [The local preference policy is located at http://sonomacounty.ca.gov/Services/Local-Preference-Policy-for-Services/](http://sonomacounty.ca.gov/Services/Local-Preference-Policy-for-Services/). A business shall affirm it qualifies as a local business on a declaration form (attached as Exhibit E). The Water Agency also encourages the utilization of local financing partners.

Following the evaluation of written proposals, the Water Agency, at its sole discretion, may select proposers to be invited to an interview. Interviews will consist of questions directed to each Proposer to clarify Proposer's proposal as necessary. The evaluation committee may use this additional information to revise the score of the proposals. Proposer shall be prepared to make a presentation to the evaluation committee.

The issuance of this RFP does not constitute a promise by the Water Agency that any contract will actually be entered into by the Water Agency as a result of the RFP. The Water Agency expressly reserves the right at any time to:

- Waive or correct any defect or informality in any response, proposal, or proposal procedure;
- Ask additional and follow up questions of any firm submitting a proposal;
- Reject any or all proposals;
- Determine that more than a single vendor is necessary to meet needs;
- Reissue a RFP;
- Prior to the submission deadline for proposals, modify all or any portion of the selection procedures, including deadlines for accepting responses, the specifications or requirements for any materials, equipment or services to be provided under this RFP, or the requirements for contents or format of the proposals; or
- Procure any materials, equipment or services specified in this RFP by any other means, or determine that no project will be pursued.

All proposals submitted in response to this request shall be deemed public records. In the event that a Proposer desires to claim portions of its proposal exempt from disclosure, it is incumbent

upon the Proposer to clearly identify those portions with the word "confidential" printed on the lower right-hand corner of the page. The Water Agency will consider a Proposer's request for exemption from disclosure; however, the Water Agency will make a decision based upon applicable laws. Assertions by a Proposer that the entire proposal or large portions are exempt from disclosure will not be honored. All responses to this Request for Proposals shall become the property of the Water Agency and will be retained or disposed of accordingly.

The Water Agency shall not be liable for any pre-contractual expenses incurred by any Proposer. The Water Agency shall be held harmless and free from any and all liability, claims, or expenses whatsoever incurred by, or on behalf of, any person or organization responding to this RFP.

All data and information furnished by Water Agency or referred to in this RFP are furnished for the Proposer's convenience. The Water Agency does not guarantee that such data and information are accurate and assumes no responsibility whatsoever as to its accuracy or interpretation. Proposers shall satisfy themselves as to the accuracy or interpretation of all such information and data.

By submitting a proposal in response to this RFP, the Proposer waives all rights to seek any legal remedies regarding any aspect of this RFP, the Water Agency's selection of a proposer, and the Water Agency's rejection of any and all proposals.

The Water Agency also reserves the right to negotiate any price or provisions and accept any part, or all parts of any or all proposals, whichever is in the best interest of the Water Agency.

Contacts

Proposers must direct all questions about the meaning or intent of the RFP to Water Agency in writing. Inquiries must include the full name of the Project. Water Agency may not answer questions received less than fourteen calendar days prior to the date for proposal submission due date. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect. If you have any questions, please contact Rebecca Simonson at Rebecca.Simonson@scwa.ca.gov.

Sincerely,

/s/ James Jasperse

James Jasperse, P. E.
Chief Engineer